Met Office

Lloyds builds on Met Office extreme weather event research

Nov 24, 2016 2:09 PM

Lloyd's has published a new study that supports the case that extreme weather events can be modelled as "independent" by global reinsurers when assessing many of their key aggregate risks around the world.

The report, The Risk of Global Weather Teleconnections, in association with the Met Office, analyses the links between extreme weather events occurring in separate regions of the world that can take place over a range of timescales from days to years (known as teleconnections).

The report's key findings are as follows:

- Met Office research found that the majority of perils are not significantly correlated, but identified nine noteworthy peril-to-peril teleconnections, most of which are negatively correlated;
- Lloyds' modelling finds that these correlations were not substantial enough to warrant changes to the amount of capital it holds to cover extreme weather claims;
- Even when there is some correlation between weather patterns, it does not necessarily follow that there will be large insurance losses. Extreme weather events may still occur simultaneously even if there is no link between them;
- An assumption of independence for capital-holding purposes is therefore appropriate for the key risks the Lloyd's market currently insures; and
- The methodology released in the report enables scenario modelling across global portfolios for appropriate region-perils.

Commenting on the report's findings, Trevor Maynard, Head, Exposure Management & Reinsurance at Lloyd's said: "The report's findings go a long way to answering the challenge that capital for local risks should be held in their own jurisdictions. Lloyd's believes this approach reduces the capital efficiency of the (re)insurance market by overlooking the heart of insurance and the diversification benefits provided by writing different risks in different locations, and in doing so, needlessly increase costs to the ultimate detriment of policyholders. Insisting on the fragmentation of capital is not in the best interest of policyholders."

Professor Dame Julia Slingo, Chief Scientist at the Met office, said: "This report demonstrates the continuous improvement in our understanding of connections between climate drivers and regional perils across the globe. When we add this to our cutting-edge capabilities in simulating the global climate to the local weather and in deploying these for more skilful long-range predictions, we can help (re)insurers model multiple, and possibly teleconnected, scenarios and more effectively manage their portfolio of risk."

Lloyd's worked with the Met Office to develop this innovative study, which for the first time analyses the potential links between weather events globally; existing methodologies cover single regions only. This allows reinsurers to use the report to model scenarios across their global portfolios.

The Met Office research analysed the impact of nine (out of a pool of 22) "earth-system drivers", such as El Niño, on 16 priority region-perils that Lloyd's selected as the most important. Lloyd's then ran this information through its internal model to arrive at the report's conclusion.

In a groundbreaking move, Lloyd's and the Met Office have made the methodology publicly available to allow debate and review.

Met Office

© Crown Copyright 2017